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
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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|------------------------|---------------------|------------------|
| 10/700,223   | 11/03/2003  | Michiel van Nieuwstadt | 81093007            | 3083             |
| 22844  | 7590        | 03/25/2005             | EXAMINER            |                  |
| FORD GLOBAL TECHNOLOGIES, LLC.<br>SUITE 600 - PARKLANE TOWERS EAST<br>ONE PARKLANE BLVD.<br>DEARBORN, MI 48126 |             |                        | TRAN, BINH Q        |                  |
|  |             |                        | ART UNIT            | PAPER NUMBER     |
|  |             |                        | 3748                |                  |

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|  |                                      |  |   |
|--|--------------------------------------|--|---|
| <p align="center"><b>Office Action Summary</b></p> | <b>Application No.</b><br>10/700,223 | <b>Applicant(s)</b><br>VAN NIEUWSTADT ET AL. |   |
|  | <b>Examiner</b><br>BINH Q. TRAN      | <b>Art Unit</b><br>3748                      |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 6-8 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Election / Restriction*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5, and 9-10, drawn to an exhaust gas aftertreatment system for an internal combustion engine exhaust, classified in class 60, subclass 300.*
- II. Claims 6-8, drawn to a method for controlling a temperature of an oxidation catalyst, classified in class 60, subclass 284.*

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01. In the instant case, the different inventions have different modes of operation. Specifically, claims 6-8 require the steps of in response to said indication controlling the temperature of the oxidation catalyst by adjusting an amount of reductant in an exhaust gas mixture entering the ALNC ...

Because these inventions are distinct for the reason given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

During a telephone conversation with Ms. Julia Voutyras ( Reg. No. 48,019) on March 16, 2005 a provisional election was made without traverse to prosecute the invention I, according to claims 1-5, and 9-10 read thereon. Affirmation of this election must be made by applicant in replying to this Office Action. Claims 6-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

***Claims 1, and 9 are rejected under 35 U.S.C. 102 (e) as being anticipated by Pfeifer et al.***

***(Pfeifer) (Patent Number 6,725,647).***

Regarding claims 1 and 9, Pfeifer discloses an exhaust gas aftertreatment system for an internal combustion engine (1) exhaust, the system comprising: an Active Lean NO<sub>x</sub> catalyst (IV); an oxidation catalyst (III) coupled downstream of said ALNC (IV); and a selective catalytic reduction catalyst (II) coupled downstream of said oxidation catalyst (III) (e.g. See Fig. 3; col. 6, lines 14-67; col. 7, lines 1-25).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfeifer in view of Matros et al. (Matros) (Patent Number 6,314,722).***

Regarding claims 2-3, Pfeifer discloses all the claimed limitation as discussed above except a particulate filter coupled downstream of said SCR catalyst in exhaust gas aftertreatment system for a diesel engine.

Pfeifer teaches that it is conventional in the art, to use a particulate filter (38) coupled downstream of said SCR catalyst (18) in exhaust gas aftertreatment system for a diesel engine (See col. 6, lines 21-45; col. 8, lines 8-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to use a particulate filter coupled downstream of said SCR catalyst in exhaust gas aftertreatment system for a diesel engine of Pfeifer, as taught by Matros for the purpose of

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absorbing the particulate in the exhaust gas, so as to reduce the poisoned materials in the purifying catalyst and to reduce amount of nitrogen oxides in the exhaust gas of the lean-burn engine, and further improve the performance of the engine and the efficiency of the emission device.

Regarding claim 4, Matros further discloses a first reductant injection system (24) adapted to inject hydrocarbon into an exhaust gas stream entering said ALNC (See col. 6, lines 21-45; col. 8, lines 8-65).

Regarding claim 5, Matros further discloses that the a second reductant injection system adapted to inject aqueous urea into an exhaust gas stream entering said 5CR catalyst (See col. 6, lines 8-67; col. 7, lines 1-58).

***Allowable Subject Matter***

Claim 10 is allowed.

The following is an examiner's statement of reasons for allowance: The prior art fails to disclose or render obvious the claimed combination including a computer storage medium having a computer program encoded therein, comprising: code for providing an indication that the SCR catalyst is degraded; and in response to the indication, discontinuing urea injection into the 5CR catalyst and injecting a predetermined amount of reductant into an exhaust gas stream entering the ALNC wherein the predetermined amount of reductant is based on an amount of NO<sub>x</sub> in the exhaust gas mixture entering the ALNC.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

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***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents:

Genderen (Pat. No. 6742330), Khair et al. (Pat. No. 6718757), Hepburn (Pat. No. 5727385), Murachi et al. (Pat. No. 5746989), and Binder et al. (Pat. No. 6766642) all disclose an exhaust gas purification for use with an internal combustion engine.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT  
March 18, 2005



Binh Q. Tran  
Patent Examiner  
Art Unit 3748